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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,911	11/20/2001	Victor I. Chornenky	P775 CON 3	6127

28390 7590 08/25/2005
MEDTRONIC VASCULAR, INC.
IP LEGAL DEPARTMENT
3576 UNOCAL PLACE
SANTA ROSA, CA 95403

EXAMINER

SHAY, DAVID M

ART UNIT PAPER NUMBER

3739

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/010,911	Applicant(s) CHORNENKY ET AL.	
	Examiner david shay	Art Unit 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 13, 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40 and 47-60 is/are pending in the application.
- 4a) Of the above claim(s) 40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 47-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Applicant argues that Parker et al teach an x-ray tube is not smaller than 3 mm and could not be made so by a mere reduction of scale. Applicant bolsters this assertion by noting that Parker uses liquid cooling and asserting that reducing the size of the device would “increase the probability of flashover.” The examiner must disagree. The reduction in size required to render the device of Parker et al less than 3 mm would be a reduction of slightly greater than 5%. Further, it is noted that liquid cooling is only associated with a single embodiment (that of figure 10) and is not disclosed as being associated with or required for any particular size of the device. Lastly, applicant’s allegations to the contrary notwithstanding, there is no indication from Parker et al that flashover is a problem, nor has applicant provided any showing that the “probability of flashover” is a considerable, as opposed to a negligible one. Lastly, applicant has provided no composition, treatment of, or process for producing any insulator that was not already known and would therefore have been used by the ordinarily skilled artisan to prevent flashover in the Parker et al device, even assuming, *arguendo* that such was a problem.

Applicant also argues that the references “do not teach or suggest an electrically insulating material positioned between the vacuum chamber wall and the anode”. The examiner respectfully notes that the support structures of Parker et al are clearly insulators. Note, for example, element 88 (filament support structure) of Figure 10, which must be an insulator, or the heating current for the filament would short circuit through it. Thus the other support structures, which are similarly described, illustrated, and cross-hatched in Parker et al are also clearly insulators, as one having ordinary skill in the art would readily understand.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “an electric field of

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approximately 20 keV/micron to prevent flashover” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The amendment filed February 7, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: “an electric field of approximately 20 keV/micron to prevent flashover”.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

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pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 50 and 55-60 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The originally filed disclosure is silent on "an electric field of approximately 20 keV/micron to prevent flashover".

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 49, 50 and 55-60 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 49 is indefinite as it is unclear what further structure is to be inferred by reciting that the cable is capable of delivering direct current voltage, since any lump of conductive material is capable of so doing. Claims 50 and 55 are indefinite, as the exact meaning of the term "20 keV/micron" is unclear. For the purposes of examination, this term will be interpreted as indicating the voltage per micron of linear separation between the cathode and the anode.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 47-53, 55, 59, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al in combination with Charms. Parker et al teach a device including a cathode,

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anode, and an evacuated chamber, wherein the chamber is x-ray transparent; the cathode and anode supports are insulators, wherein the continuum of radiation generated will include radiation in the 8-10 keV range, and wherein there is no flashover, and is thus operating with a field strength of 20keV/micron or less. Charms teach the equivalence of coaxial and non-coaxial cables to transmit electrical signals in catheters. Thus it would have been obvious to the artisan of ordinary skill to employ a coaxial cable in place of the non-coaxial cable of Parker et al, since these are recognized equivalents in the art, as taught by Charms; to employ solder to provide the connection between the coaxial cable and the electrodes, since this is a notorious means for providing an electrical connection, official notice of which is hereby taken; thus producing a device such as claimed.

Claims 54 and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al in combination with Charms as applied to claims 47-53, 55, 59, and 60 are above, and further in view of Suzuki and Houston. Suzuki teaches boron nitride as a housing composition in an X-Ray tube. Houston teaches the equivalence of quartz and boron nitride as insulators. It would have been obvious to the artisan of ordinary skill to employ boron nitride in the housing of Parker et al, since these are equivalent as insulators, as taught by Houston and since it is appropriate for an x-ray tube housing, as taught by Suzuki, and to employ anisotropic, isotropic, or pyrolytic boron nitride since these are all well known forms of boron nitride, which still retain their insulative properties, official notice of which is hereby taken, thus producing a device such as claimed.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

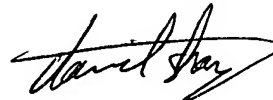
Any inquiry concerning this communication or earlier communications from the examiner should be directed to david shay whose telephone number is (571) 272-4773. The examiner can normally be reached on Tuesday through Thursday from 6:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak, can be reached on Monday, Tuesday, Thursday, and Friday. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "David M. Shay", with a stylized flourish at the end.

DAVID M. SHAY
PRIMARY EXAMINER
GROUP 330